

Serial No. 10/647,642

PATENT

REMARKS

In the Final Office Action dated September 13, 2006 claims 1, 3, 4, 7 to 9, 11, 12, 15 to 19 and 22 are pending of which claims 1, 3, 4, 7 to 9, 11, 12, 15 to 19 and 22 are rejected.

Claims 1, 3, 4, 7 to 9, 11, 12, 15 to 19 and 22 are rejected under 35 USC 103 (a) as being unpatentable over US Patent 5,873,906 (Lau et al) in view of US Patent 5,562,726 (Chuter).

No amendments to the specification and claims are presented in this response.

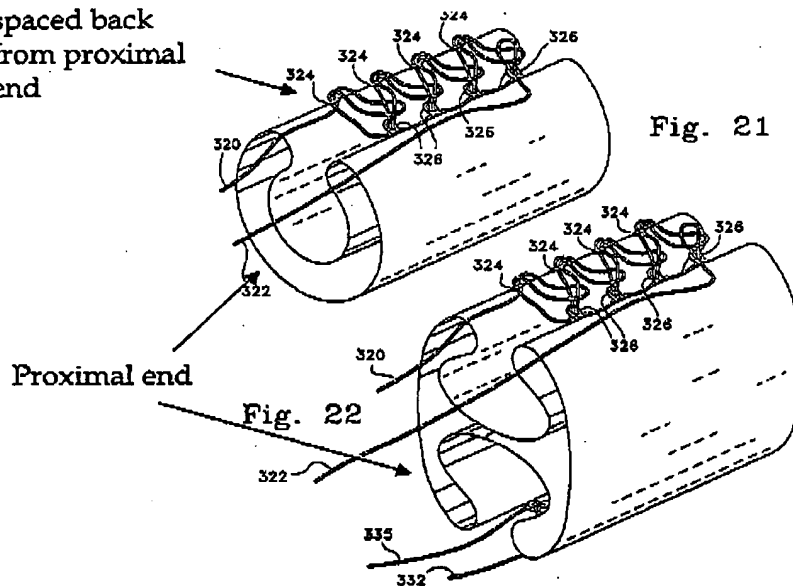
The examiner has considered our arguments filed with our response of 17th July 2006 but has concluded that the stent of Lau has attachment points along the entire length of the stent including both the proximal and distal ends. With respect, however, we submit that the phrase "a plurality of retention points of the circumference of the proximal end of the stent graft prosthesis" is quite clear that the retention points are at the actual proximal end and not spaced some distance back from the end.

As can be seen in the drawing below extracted from Lau et al there is no retention at the proximal end but retention along the length of the stent commencing at a distance spaced back from the proximal end and the commencement of the stitching being spaced back from the proximal end.

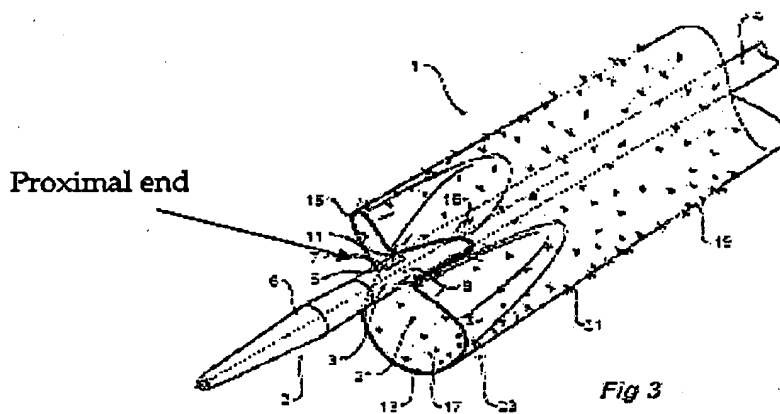
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Retention
spaced back
from proximal
end



In the present case the retention is actually at the proximal end of the stent graft prosthesis as shown below in Figure 3 from the present application.



As was explained in the previous response Lau et al shows a method of reduction of the diameter of a stent graft by providing loops or stitches in a tether wire 320, 322 (Figure 21) which extends between circumferentially spaced loops 324 and 326 along the length of the body of the stent graft. Lau does not show, as is alleged by the Examiner, that the proximal end of the stent graft is held in place onto

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a deployment device at a plurality of points at the proximal end of the stent graft. Lau et al teaches diameter reduction along the length of a graft but does not teach or suggest retention at the proximal end.

As is explained in the present application the problem faced by the present inventors is that during release of a stent graft in a curved vessel which has blood flowing in it it is important to ensure that the proximal end, and not some portion spaced somewhat back from the proximal end is retained in the claimed fashion.

We further draw the examiners attention to the words "a retention of the stent graft prosthesis to the guide wire catheter" of claim 1. In Lau et al there is in fact no retention of the stent graft a delivery device at all. Circumferentially spaced apart points along the length of the stent graft are connected to each other and not to the delivery device. The examiner has drawn our attention to column 18 lines 27 to 31 which states

"The eyelets (324 and 326) may be wire or polymeric thread or the like tied to the stent structure at the edge of the stent fold. If so desired, the loops may be dispensed with and the slip line woven directly into the stent structure."

There is no teaching or suggestion in this sentence of retention of the stent graft to the catheter as is suggested by the Examiner.

There is no teaching or suggestion that Lau et al understood the problem of deployment of endovascular devices in curved vessels and certainly no structure in Lau et al which would overcome the problems faced by the present inventors.

As explained above the problem the problem faced by the present inventors is that during release of a stent graft in a curved vessel which has blood flowing in it is important to ensure that the proximal end is retained in the claimed manner. In Lau et al and without specific retention of the proximal end of the stent to the catheter, then upon release in a curved vessel the entire stent would buckle against the outer side of the curved vessel causing a blockage of blood flow which is a problem which would require emergency open chest surgery to correct. This would negate entirely the advantages of endovascular minimally invasive techniques.

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In our submission it is not reasonable, therefore, for the examiner to state that the reference Lau et al teaches that lobes of different size are formed at the proximal end of the stent graft prosthesis by retaining the proximal end of the stent graft prosthesis to the guide wire catheter in the sense that they are claimed in the present application. In Lau et al longitudinal folds are formed to reduce the diameter of the stent graft for deployment but the diameter reduction does not form lobes which are retained to the guide wire catheter at the proximal end.

Hence Lau et al does not teach or suggest;

- (a) retention at the proximal end
- (b) retention to the guide wire catheter, and
- (c) lobes of different sizes retained to the guide wire catheter.

Chuter teaches that mooring loops can extend between a delivery system and graft but there is no teaching of lobes of different size at the proximal end of the stent graft.

There is also no teaching or suggestion that Chuter understood the problem of deployment of endovascular devices in curved vessels and certainly no structure in Chuter which would overcome the problems faced by the present inventors.

We submit that the combination of Lau et al and Chuter does not teach or even suggest each and every feature of the claimed invention and we submit that the claimed invention is novel and inventive over these references taken singly or in combination. There is no teaching in the combination of the documents of retention to a guide wire catheter of delivery device at the proximal end of the stent graft to produce lobes of different sizes.

We submit that all claims of this application are novel and inventive.

The examination and reconsideration of this application is respectfully requested and it is further requested that this application be passed to issue.

Although the foregoing discussion is believed to be dispositive of the issues in this case, applicants' attorney requests a telephone interview with the Examiner to further discuss any unresolved issues remaining after the Examiner's consideration of this matter.

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Respectfully submitted,

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Date:

Oct 9, 2006

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